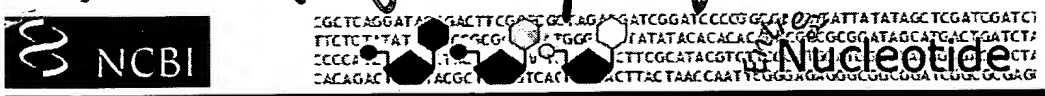
ref. for epitope



☐1: Y00815. Human mRNA for LC...[gi:34266] Links

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DEFINITION  Human mRNA for LCA-homolog. LAR protein (leukocyte antigen
            related).
ACCESSION   Y00815
VERSION     Y00815.1  GI:34266
KEYWORDS    antigen; cell surface glycoprotein; glycoprotein; immunoglobulin
            superfamily; LAR gene; leukocyte common antigen; neural cell
            adhesion molecule; transmembrane protein.
SOURCE      Homo sapiens (human)
  ORGANISM  Homo sapiens
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE   1
  AUTHORS   Streuli,M., Krueger,N.X., Hall,L.R., Schlossman,S.F. and Saito,H.
  TITLE     A new member of the immunoglobulin superfamily that has a
            cytoplasmic region homologous to the leukocyte common antigen
  JOURNAL   J. Exp. Med. 168 (5), 1523-1530 (1988)
  MEDLINE   89035978
   PUBMED   2972792
REFERENCE   2
  AUTHORS   Schaapveld,R.Q., van den Maagdenberg,A.M., Schepens,J.T.,
            Weghuis,D.O., Geurts van Kessel,A., Wieringa,B. and Hendriks,W.J.
  TITLE     The mouse gene Ptprf encoding the leukocyte common antigen-related
            molecule LAR: cloning, characterization, and chromosomal
            localization
  JOURNAL   Genomics 27 (1), 124-130 (1995)
  MEDLINE   95394448
   PUBMED   7665159
REFERENCE   3  (bases 1 to 7702)
  AUTHORS   Saito,H.
  TITLE     Direct Submission
  JOURNAL   Submitted (15-SEP-1988) Saito H., Dana-Farber Cancer Institute, 44
            Binney Street, Boston, MA 02115
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1/9/1 (Item 1 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

09096593 BIOSIS NO.: 199497104963
Characterization of AE-6 monoclonal antibody recognizing VHCSAGV sequence in CD45 PTPase domain.
AUTHOR: Takeuchi Tsutomu; Sekine Hiromi; Koide Jun; Abe Tohru
AUTHOR ADDRESS: Saitama Med. Sch., Saitama**Japan
JOURNAL: Tissue Antigens 42 (4):p441 1993
CONFERENCE/MEETING: 5th International Conference on Human Leukocyte Differentiation Antigens Boston, Massachusetts, USA November 3-7, 1993
ISSN: 0001-2815
RECORD TYPE: Citation
LANGUAGE: English
REGISTRY NUMBERS: 79747-53-8: PROTEIN TYROSINE PHOSPHATASE
DESCRIPTORS:
MAJOR CONCEPTS: Biochemistry and Molecular Biophysics; Blood and Lymphatics (Transport and Circulation); Cell Biology; Clinical Immunology (Human Medicine, Medical Sciences); Enzymology (Biochemistry and Molecular Biophysics); Membranes (Cell Biology)
BIOSYSTEMATIC NAMES: Hominidae--Primates, Mammalia, Vertebrata, Chordata, Animalia
ORGANISMS: human (Hominidae)
BIOSYSTEMATIC CLASSIFICATION (SUPER TAXA): animals; chordates; humans; mammals; primates; vertebrates
CHEMICALS & BIOCHEMICALS: PROTEIN TYROSINE PHOSPHATASE
MISCELLANEOUS TERMS: FIBRONECTIN DOMAIN; MEETING ABSTRACT; PROTEIN TYROSINE PHOSPHATASE; SIGNAL TRANSDUCTION; TISSUE ANTIGEN
CONCEPT CODES:
02508 Cytology and Cytochemistry-Human
10064 Biochemical Studies-Proteins, Peptides and Amino Acids
10506 Biophysics-Molecular Properties and Macromolecules
10508 Biophysics-Membrane Phenomena
10806 Enzymes-Chemical and Physical
10808 Enzymes-Physiological Studies
15008 Blood, Blood-Forming Organs and Body Fluids-Lymphatic Tissue and Reticuloendothelial System
34508 Immunology and Immunochemistry-Immunopathology, Tissue Immunology
00520 General Biology-Symposia, Transactions and Proceedings of Conferences, Congresses, Review Annuals
10068 Biochemical Studies-Carbohydrates
BIOSYSTEMATIC CODES:
86215 Hominidae

1: Biochem J 1992 Jun 1;284 (Pt 2):569-76 Related Articles, Links

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Insulin receptor and epidermal growth factor receptor dephosphorylation by three major rat liver protein-tyrosine phosphatases expressed in a recombinant bacterial system.

Hashimoto N, Zhang WR, Goldstein BJ.

Research Division, Joslin Diabetes Center, Boston, MA.

Protein-tyrosine phosphatases (PTPases) play an essential role in the regulation of signal transduction mediated by reversible protein-tyrosine phosphorylation. In order to characterize individual rat hepatic PTPases that might have specificity for autophosphorylated receptor tyrosine kinases, we isolated cDNA segments encoding three PTPases (PTPase 1B, LAR and LRP) that are expressed in insulin-sensitive liver and skeletal muscle tissue, and evaluated their catalytic activity in vitro. The intrinsic PTPase activities of the full-length PTPase 1B protein and the cytoplasmic domains of LAR and LRP were studied by expression of recombinant cDNA constructs in the inducible bacterial vector pKK233-2 using extracts of a host strain of Escherichia coli that lacks endogenous PTPase activity. Each of the cloned cDNAs dephosphorylated a cognate phosphopeptide derived from the regulatory region of the insulin receptor. Despite having only 30-39% sequence identity in their catalytic domains, LAR and PTPase 1B had similar relative activities between the peptide substrate and intact insulin receptors, and also displayed similar initial rates of simultaneous dephosphorylation of insulin and epidermal growth factor (EGF) receptors. In contrast, LRP exhibited a higher rate of dephosphorylation of both intact receptors relative to the peptide substrate, and also dephosphorylated EGF receptors more rapidly than insulin receptors. These studies indicate that three PTPases with markedly divergent structures have the catalytic potential to dephosphorylate both insulin and EGF receptors in intact cells and that redundant PTPase activity may occur in vivo. For these PTPases to have specific physiological actions in intact cells, they must be influenced by steric effects of the additional protein segments of the native transmembrane enzymes, cellular compartmentalization and/or interactions with regulatory proteins.

PMID: 1599438 [PubMed - indexed for MEDLINE]

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